U.S. FISH AND WILDLIFE SERVICE
SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: *Stagnicola bonnevillenis* (Call, 1884)

COMMON NAME: Fat-whorled pondsnail

LEAD REGION: Region 6

INFORMATION CURRENT AS OF: December 2005

STATUS/ACTION:
___ Species assessment - determined we do not have sufficient information on file to support a proposal to list the species and, therefore, it was not elevated to Candidate status
___ New candidate
_X_ Continuing candidate
___ Non-petitioned
_X_ Petitioned - Date petition received: 05/11/2004
__ 90-day positive - FR date:
__ 12-month warranted but precluded - FR date:
__ Did the petition request a reclassification of a listed species?

FOR PETITIONED CANDIDATE SPECIES:
a. Is listing warranted (if yes, see summary of threats below)?
b. To date, has publication of a proposal to list been precluded by other higher priority listing actions?
c. If the answer to a. and b. is "yes", provide an explanation of why the action is precluded.

We find that the immediate issuance of a proposed rule and timely promulgation of a final rule for this species has been, for the preceding 12 months, and continues to be, precluded by higher priority listing actions (including candidate species with lower LPNs). During the past 12 months, almost our entire national listing budget has been consumed by work on various listing actions to comply with court orders and court-approved settlement agreements, meeting statutory deadlines for petition findings or listing determinations, emergency listing evaluations and determinations, and essential litigation-related, administrative, and program management tasks. We will continue to monitor the status of this species as new information becomes available. This review will determine if a change in status is warranted, including the need to make prompt use of emergency listing procedures. For information on listing actions taken over the past 12 months, see the discussion of "Progress on Revising the Lists," in the current CNOR which can be viewed on our Internet website (http://endangered.fws.gov/).

___ Listing priority change
Former LP: __
New LP: ___
Date when the species first became a Candidate (as currently defined): 09/19/1997

ANIMAL/PLANT GROUP AND FAMILY: Snail
Phylum: Molluska, Class: Gastropoda, Order: Basommatophora, Family Lymnaeidae

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Utah/Box Elder County

CURRENT STATES/COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE: Utah/Box Elder County

LAND OWNERSHIP: Owners of the spring pool areas include ATK Alliant Techsystems Inc., Utah State highway right-of-way, Connor Cattle Company, and the Bureau of Land Management (BLM). Water rights ownership is unknown.

Around 1990, the Union Pacific Railroad Company deeded a portion of the 400-foot wide railroad alignment north of the Great Salt Lake back to the United States government; this 400-foot wide railroad alignment is now managed by the BLM. The alignment includes most of the habitat and population of *S. bonnevillensis*. All of Pipe Spring and Fish Spring and most of Horse Spring B and Horse Spring A are within this tract of land. Utah State Route 83 is immediately north of the Railroad alignment through the reach of occupied *S. bonnevillensis* springs. The land north of the Highway 83 right-of-way is owned by ATK Thiokol Propulsion of ATK, Inc. This land includes a portion of Horse Spring B. The land south of the Railroad alignment is owned by the Connor Cattle Corporation. This land includes all of Shotgun Spring.

LEAD REGION CONTACT: Pat Mehlhop (303) 236-4215

LEAD FIELD OFFICE CONTACT: Marianne Crawford, (801) 975-3330, x 134

BIOLOGICAL INFORMATION:

Species Description
Stagnicola bonnevillensis is a large lymnaeid resembling some morphs of the widely distributed *Stagnicola catascopium* but differing in having a thinner shell, less extensive parietal callus, more rounded whorl, and (in some specimens) characteristic, oblique, spiral sculpturing not seen in any other lynmaeid (Call 1884). It has a dextral shell, about 30 millimeters in length, with width varying from about 50 to 60 percent of length. Whitish to pale brown with six whorls in mature specimens; aperture subaurate but variable in shape, its length varying from 52 to 70 percent of the length of the shell. A sigmoid, reflected inner lip which partly or completely obscures the umbilicus, and with a thin curved outer lip which in some specimens exhibits a reddish collabral band within. The nuclear whorls are dark brown, mostly smooth, and of 1.5 whorls. Sculpture of the following whorls, fine to coarse collabral lines or ridges and in many specimens, of broad, flat spiral bands which may be sub-parallel with the suture or may descent more or less obliquely across the whorls in a manner not seen in any other species. Call's original figures of the shell were reproduced by Baker (1911) and by Chamberlin and Jones (1929). The soft parts vary in color from whitish through pale yellowish to mottled, one highly pigmented specimen having a blackish mantle with yellowish blotch, yellowish tentacles

and a purplish gray-black foot. The tentacles are flat and triangular. The radula from a 24-mm long specimen had the formula 00-0-00 and had the bicuspid first lateral teeth which are characteristic of the genus *Stagnicola.*

Taxonomy

The species was originally named *Limnophysa bonnevillensis*; the type description for this species was by Call (1884). Chamberlin and Jones (1929) called the species *Stagnicola bonnevillensis*, as have most subsequent authors (e.g., Turgeon et al. 1998). Many taxonomic uncertainties occur in the family Lymnaeidae and in the genus *Stagnicola.* However, there is a consensus of expert taxonomic opinion including Turgeon et al. (1988, 1998) and Burch (1989) that *S. bonnevillensis* is treated as a valid species distinct from other lynmaeids.

Habitat/Life History

The Gilbert shoreline of Pleistocene Lake Bonneville characterizes the geologic setting of the series of spring habitats that supports the remaining populations of *S. bonnevillensis*. This geologic feature provides a suitable foundation of coarse soils across the otherwise fine-soiled mud flat playa of the Bear River arm of the Great Salt Lake.

Stagnicola bonnevillensis occupies small, well-vegetated spring-fed ponds of between 0.25 and 1 acre in size with diverse substrates (mud, gravel, and/or rocks) (Utah Division of Wildlife Resources [UDWR] 1998). Individuals spend their entire life history from egg to adult within the spring-fed ponds. Observations of *S. bonnevillensis* indicate the species exhibits a typical lymnaeid annual life cycle, with snails overwintering as adults and with egg-laying occurring in the spring and summer (Clarke 1991). Field studies of the natural diets of lymnaeids, including species of Stagnicola, have found that foods have included filamentous algae, macrophytes such as *Utricularia* (bladderwort), *Ranunculus* (buttercup), *Lemna* (duckweed), and *Potamogeton* (pondweed), and dead insects (UDWR 2005).

Historical Range/Distribution

Considerable endemism of aquatic taxa has developed within the Great Basin (Mock et al. 2004). Lake Bonneville was a pluvial freshwater lake covering 51,700 square kilometers at its maximum, about 17,000 years ago. Lake Bonneville receded rapidly following a dramatic breach at its northern boundary. This initial breach formed the Provo shoreline but continued to recede following the end of the last ice age. The Gilbert Shoreline formed between 10,000 and 11,000 years ago, resulted from a partial refilling of Lake Bonneville, and was followed by a series of fluctuations and a general decline in lake levels. The Great Salt Lake is a current remnant of Lake Bonneville (Mock et. al. 2004). The abundance of prehistoric *S. bonnevillensis* shells throughout the former lake bed and along the old shores of Lake Bonneville suggest that it was one of the most common macroscopic organisms to inhabit Lake Bonneville. The presence of its shells also indicates that Lake Bonneville, unlike its modern remnant, the Great Salt Lake, was a freshwater body. Shrinkage of Lake Bonneville to the current Great Salt Lake and other basin lakes and the resultant rise in salinity of these modern lakes was probably the cause of the near extinction of *S. bonnevillensis* prehistorically and has resulted in its refugial status today. The species currently occupies only a very small fraction of its prehistoric habitat range (G. Oliver, UDWR, pers. comm., 2005).

Current Range/Distribution

Clarke (1991) reported the extant populations of *S. bonnevillensis* inhabiting three spring-fed pool systems located in an area about 3 miles long close to Utah Highway 83 northwest of Corinne, in Box Elder County, Utah. The UDWR surveys substantiate that *S. bonnevillensis* has been present in five pools north of the Great Salt Lake in Box Elder County, Utah (UDWR 2005). These springs, named from west to east, are Shotgun Spring [UTM 382057E 4609311N] south of Utah State Route 83; Pipe Spring [UTM 382108E 4609433N] south of Utah State Route 83; Fish Spring [385139E 4607836N] south of Utah State Route 83; Horse Spring B [UTM 385653E 4607614N]; and Horse Spring A [385844E 4607516N]. Pools of Horse Spring A and B are connected by a culvert under Utah State Route 83. (Universal Transverse Mercator [UTM] coordinates are for sampling locations for UDWR monitoring, using zone 12, North American Datum 1927 [NAD 27]).

Population Estimates/Status

UDWR biologists conducted population monitoring at the five known sites of *S. bonnevillensis* from November 2004 to November 2005. The results are summarized in Table 1.

Table 1. Individuals of *Stagnicola bonnevillensis* counted in surveys conducted by UDWR biologists in 2004 and 2005.

SITE	November 2004	April 2005	November 2005
Horse Spring A	7	8	480*****
Horse Spring B	0	0	0
Fish Spring	300-325	24	500+
Pipe Spring	1	0	57
Shotgun Spring	0	89	N/A******

***** 192 Stagnicola counted in 0.4 m^2 – 480 is an estimate.

****** Monitoring stakes were not present, consequently, monitoring was not completed; however, Stagnicola were present.

THREATS

A. The present or threatened destruction, modification, or curtailment of its habitat or range.

In 1862, Congress granted the railroad companies a 400-foot wide strip (200 feet either side of the railroad center line across Federal lands from Nebraska to California) for the construction of the Transcontinental Railroad. In the spring of 1869 the Union Pacific Railroad Company exploited the Gilbert shoreline as the route of the Transcontinental Railroad (Golden Spike Heritage Foundation 2005). The Railroad passed over or ran directly adjacent to each of the springs now currently occupied by *S. bonnevillensis.* The construction of the railroad undoubtedly impacted the species and its habitat; however, *S. bonnevillensis* and a portion of its habitat survived the construction and operation of the Railroad and have persisted for 130 years. Sometime before the abandonment of the railway spur, extensive amounts of river cobble were placed along the railroad embankment in the north end of Pipe Spring. *Stagnicola bonnevillensis* adapted to this new substrate and re-colonized this portion of its habitat. State Route 83 was constructed along side of the railway alignment and is now a two-lane, asphalt-surfaced highway. This highway passes over the spring pools of Horse Spring A and B. Runoff from the road pavement presumably carries oil, grease, and paticulated matter into the springs.

The Chevron Oil Company constructed an 8-inch pipeline from its refinery in North Salt Lake to the Pacific Northwest. This pipeline was constructed in about 1948 and is buried in the [Transcontinental] Railroad bed through the habitat of *S. bonnevillensi*s. Another 8-inch pipeline was constructed in about 1952, along the same alignment. These lines are a source of potential chemical contamination. These pipelines extend from Salt Lake City to a distribution hub near Spokane, Washington. The pipelines carry product originating from nine different petroleum companies, but Chevron Pipeline assumes responsibility for operation and maintenance of the pipelines. One of the pipelines is currently dedicated to diesel fuel; the other line transports various products, including gasoline, jet fuel, and diesel. Chevron Pipeline conducts a continuous monitoring and maintenance program, and the pipelines meet current operation standards and requirements (UDWR 2005).

Although no pipeline release incidents have yet impacted identified *S. bonnevillensis* habitat, two incidents that have recently occurred in nearby areas underscore the potential for risk. In 2000, the diesel fuel line developed a pinhole leak that went undetected for an unknown amount of time, resulting in the contamination of several acres of wetlands approximately 2.55 kilometers (1.6 miles) east of the *S. bonnevillensis* Horse Spring habitat. A second release occurred late in 2002 in the multi-product line approximately 1 kilometer (0.6 mile) east of the same Horse Spring habitat. The pipeline was carrying gasoline, and the release resulted in contamination of wetland habitat for approximately 2.6 kilometers (1 mile) downstream of the release. In this case, the rupture was apparently a result of damage to the pipeline caused by unauthorized excavation and installation of a drainage culvert under the old railroad grade, and underneath the pipeline. In both of these cases, impact to identified *S. bonnevillensis* habitat was avoided because the releases occurred downstream and/or downgradient of habitat areas, and in both cases, Chevron Pipeline worked with State and Federal land and wildlife management agencies to complete cleanup and remediation in a manner that was protective of wildlife resources in the area.

Chevron Pipeline currently conducts internal integrity inspections on the pipeline on a regular basis. The goal of these inspections is to alert operators and regulators of potential problems with the pipeline in advance of any product leaks. In addition, since a release requires that the pipelines be shut down in order to repair, there is an economic incentive for leak protection in the form of lost revenues. The specific vulnerability of these snails to organic solvents and petrochemicals is not well understood and needs additional characterization. At present, in the case of a spill, the most conservative action is to eliminate these compounds from the springs, or to reduce them to the extent practicable. Increased communication between Chevron Pipeline and land/wildlife management agencies, such as mapping of pipeline and highway alignments, and developing focused spill response protocols for segments of the pipeline that lie upgradient of the springs are being pursued so that risks could be further reduced through management.

ATK Thiokol, Inc. (Thiokol), one of the owners of land on which the pools inhabited by *S. bonnevillensis* are located, operates an industrial plant not far from these pools. Recent investigations by U.S. Fish and Wildlife Service and Utah Department of Environmental Quality (UDEQ) scientists and sampling by Thiokol revealed that chemical contamination is present in some of the inhabited pools and in groundwater in the vicinity of the pools.

The Thiokol facility was constructed in the early 1960s as a manufacturing facility for military and space exploration rockets. The facility is located in the Blue Creek Valley approximately 4 kilometers (2.4 miles) northwest of the Shotgun Spring habitat of *S. bonnevillensis.* Until 1988, waste products including solvents and oxidative accelerants (rocket fuel residues) were disposed of by burning in an area of the facility called the M-136 burn grounds. This disposal area is located near Blue Creek approximately 6.5 kilometers (4 miles) north and upstream of the occupied *S. bonnevillensis* habitat. This area also is hydraulically upgradient and within the flow path of groundwater supplying this habitat (UDWR 2005). Two contaminants originating from the Thiokol facility, trichloroethylene (TCE, a chlorinated hydrocarbon cleaning solvent) and perchlorate (a component of rocket fuel), have been detected in the occupied pools and groundwater source (UDEQ unpub. data, 2005).

The disposal of wastes in unlined impoundments at the M-136 Burn Grounds was discontinued in 1988, and the impoundments were remediated (contaminated soil removed) and capped (to prevent infiltration of water into soils beneath the impoundments) in 1992. Efforts to understand and track the flow of groundwater downgradient of the Burn Grounds has been ongoing since the early 1990s, an effort made more complicated by the presence of fractured, cavernous limestone bedrock (karst geology) underlying the facility (UDWR 2005).

The springs were first sampled for TCE in 1992, and sampling for perchlorate began in 1995 UDEQ unpub. data 2001). The TCE was first detected in Fish Spring in 1995 at 2.1 micrograms per liter (µg/L, or parts per trillion), which is the detection limit, subsequent sampling indicates that TCE is no longer detectable in Fish Spring (UDEQ unpubl. data, 2005). The TCE has not been detected in any of the springs located east of Horse Spring A. The TCE has been most reliably detected in Horse Spring A, with concentrations ranging between 5 and 10 µg/L.

Perchlorate was initially detected in Pipe Spring in late 2000 at 89 µg/L. In 2001, perchlorate was detected in Pipe Spring (99 µg/L), Shotgun Spring (67 µg/L), and Horse Spring A (52 µg/L). Perchlorate also was detected in Fish Spring in 2002 at (3.8 µg/L). Perchlorate concentrations in Pipe Spring appear to be significant and increasing, with samples collected in 2003-2005 (the latest data available) ranging from 287–343 µg/L (UDEQ unpub. data 2001). Although little information exists regarding the ecological effects of perchlorate, existing data suggest that at concentrations ranging from 10 to 1,000 mg/L, effects on aquatic animals include changes in thyroid hormone production, alterations in metamorphosis, changes in development and population growth (Dean et. al. 2004).

In Measurements taken in 2004, TCE concentrations ranged from less than 0.7 µg/L in Fish Springs to 5.0 µg/L in Pipe Spring (see Table 2.). Current levels of perchlorate range from less than 4.0 µg/L in Horse Spring A to 343 in Pipe Spring (see Table 2.). Groundwater sampling indicates that the 10 µg/L isoline (the “front” of the plume with contaminant at that concentration) of the TCE plume is northwest and downgradient of Shotgun Spring. The 100 µg/L and 1,000 µg/L isolines, representing the portion of the plume with higher concentration, are 2.4 kilometers (1.5 miles) and 3.2 kilometers (2.2 miles) northwest and upgradient of Shotgun Spring respectively. Toxicity studies are currently being contracted to determine the effect of TCE and Perchlorate on the pondsnails and their habitat.

Table 2. 2004 concentrations of TCE and perchlorate in springs that are habitat for *Stagnicola bonnevillensis.*

	SHOTGUN		PIPE		FISH		HORSE A	
ANALYTE (µg/L)	**June**	**October**	**June**	**October**	**June**	**October**	**June**	**October**
Perchlorate (µg/L)	8.0	20.8	287	343	6.6	4.7	<4.0	<1.0
TCE (µg/L)	2.0	<0.7	4.8	5.0	<0.7	<0.7	3.8	4.8

***** µg/L: micrograms per Liter (parts per trillion).

Corrective action to characterize and remediate groundwater contamination at Thiokol has been ongoing since the early 1990s. Groundwater monitoring wells were included in this plan and they have been completed. Monitoring from these wells is ongoing. A groundwater model to determine the extent and direction of the contaminate plume has been completed and submitted by a private consultant to Thiokol for review. A risk assessment plan has been submitted and commented on by UDEQ, comments from UDEQ are currently being incorporated into the plan. Groundwater monitoring and corrective action at the site are regulated by a Post-Closure Permit. This permit, which will establish conditions for no further action, is currently being reissued by UDEQ.

Livestock grazing was initiated within the current *S. bonnevillensis* habitat by Mormon settlers in about 1850 and has continued to the present. Intensive, unregulated grazing has the potential to degrade the habitat of aquatic species, including *S. bonnevillensis*. The relatively high salinity of the *S. bonnevillensis* springs and the relative paucity of forage on the Great Salt Lake Playa may have somewhat protected these springs from excessive grazing from livestock. The BLM has constructed a grazing exclosure around Pipe and Fish Springs. The Highway 83 right-of-way fence protects portions of the Horse Spring complex. In 2002 ATK Alliant Techsystems, Inc., installed a protective fence around the north portion of Horse Spring B.

The BLM permits off-road vehicle (ORV) use along the railroad alignment, but this use is restricted to non-wetland portions of the railway alignment. There is currently little ORV use on private portions of the species habitat. The Golden Spike Heritage Foundation has generated a proposal to reestablish a recreational/historical railway from Brigham City, Utah, to the Golden Spike Historical Site (Golden Spike Heritage Foundation 2005). This would traverse the *S. bonnevillensis* sites and may seriously impact the snail and habitat due its close proximity to the railroad alignment. It also would provide access for other potentially damaging activities such as ORVs, increased hunting activities and developing the springs and water for other uses. Enforcement and protective measures would be necessary.

This area had experienced extended drought conditions (6 years) until 2005. Lowered groundwater levels were observed as well as reduced spring flows, reductions in size and depth of the pools and loss of the snail's habitat (ATK Thiokol, pers. comm. 2005). Furthermore, reduced water volume in the pools might result in higher concentrations of the chemical pollutants, particularly if this loss were due primarily to evaporation. The winter of 2004/2005 provided a greater snow pack than had been experienced in recent years. The springs and snail populations apparently responded positively according to observations made by Thiokol and UDWR personnel (Paul Thompson UDWR, John Holliday Thiokol, pers. comm. 2005).

B. Overutilization for commercial, recreational, scientific, or educational purposes.
None.

C. Disease or predation.
Currently, the introduced mosquitofish (*Gambusia affinis*), are present in the ponds and may predate on immature snails and egg masses. Waterfowl and other bird predators naturally utilize the snails and are more effective at low water levels. It is unknown if predation is negatively impacting the population.

D. The inadequacy of existing regulatory mechanisms.
Snails are included in the UDWR's list of sensitive species. The UDWR has designated *Stagicola bonnevillensis* as a sensitive species (UDWR 1998). However, there is no formal regulatory mechanism protecting the species or its habitat.

E. Other natural or manmade factors affecting its continued existence.
The extremely small and restricted populations of the fat-whorled pondsnail are vulnerable to any stochastic event that may adversely impact the species' habitat or populations. This area has experienced extended drought conditions during recent years, which could potentially be reflected in lowered groundwater levels, reduced spring flows, or reductions in size and depth of the pools and loss of habitat. Reduced water volume also could result in higher concentrations of the chemical pollutants, particularly if this loss were due primarily to evaporation.

CONSERVATION MEASURES PLANNED OR IMPLEMENTED

In August 2004, the UDWR assembled a technical advisory group to generate a Conservation Plan and Strategy for the fat-whorled pondsnail. Members of the group include personnel from U.S. Fish and Wildlife Service, BLM, USDA-Natural Resources Conservation Service, UDEQ, ATK Thiokol, and Chevron/Texaco. A Conservation Plan and Strategy has been drafted (UDWR 2004). Although the Plan and Strategy has not been finalized, UDWR has been implementing conservation measures and funding has been made available by ATK Thiokol. Monitoring protocols are being refined, surveys for new populations in the area were accomplished in the fall of 2005, and there is now a refugia population at the Fisheries Experiment Station (FES) in Logan, Utah. Bioassays at FES are being conducted and the technical team meets regularly to evaluate progress of the actions and to determine future needs.

SUMMARY OF THREATS

The following summary is based on information contained in our files, including information from the petition received. The range of this species is highly restricted and the only known habitat is currently threatened by chemical contamination of the groundwater. The threats continue at a moderate level: discontinued disposal of wastes in an unlined impoundment, removal of contaminated soil, installation of a cap to prevent infiltration of water into soils beneath impoundment, monitoring of downgradient groundwater for contamination, implementation of a Corrective Action Plan to characterize and remediate groundwater contamination, implementation of a site management plan, and development of a groundwater model and risk assessment are ongoing conservation actions that may alleviate the threats over the longterm. However, their effectiveness is not yet known.

LISTING PRIORITY

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	**8***
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

RATIONALE FOR LISTING PRIORITY NUMBER

Magnitude: The species is highly restricted. There is identified chemical contamination to the ground water that supports the springs of the species' only known habitat. Monitoring and studies are ongoing to better determine and mitigate known contaminant sources and a Conservation Plan and Strategy is being developed that should help alleviate the threats.

Imminence: The threats discussed in this document are currently present and have the potential to be more acute in the near future if corrective action is unsuccessful. Therefore, the threats are considered imminent.

YES Have you promptly reviewed all of the information received regarding the species for the purpose of determining whether emergency listing is needed?
Is Emergency Listing Warranted? No--emergency listing is not warranted at this time.

DESCRIPTION OF MONITORING: Water quality is monitored regularly by ATK Thiokol and UDEQ. Site visits by State biologists occurs twice a year. A Conservation Plan and Strategy is drafted and includes monitoring protocols. As a result, *S. bonnevillensis* monitoring was initiated in the fall of 2004. Biologists have established permanent monitoring stations at each site and anticipate a monitoring schedule that takes place the first week of November and the first week of March each year unless initial monitoring efforts indicate a need to change the schedule. Chevron Pipeline conducts internal integrity inspections on the pipeline on a regular basis.

COORDINATION WITH STATES: Indicate which State(s) (within the range of the species) provided information or comments on the species or latest species assessment: Utah Division of Wildlife Resources and Utah Department of Environmental Quality.

Indicate which State(s) did not provide any information or comments: None.
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APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes, including elevations or removals from candidate status and listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all resubmitted 12-month petition findings, additions or removal of species from candidate status, and listing priority changes.

Approve: Sharon Rose 11/4/2006

Acting Regional Director, Fish and Wildlife Service Date

Concur: August 23, 2006

Director, Fish and Wildlife Service Date

Do not concur: _____

Director, Fish and Wildlife Service Date